and other internal organs, with occasional blood in the urinary bladder. The most constant lesion was in the adrenal cortex. In rats that died early, adrenal hemorrhages might be the only demonstrable lesion. With later deaths, widespread adrenal necrosis was microscopically demonstrable.

If the injections were started at the beginning of the post-estrus period, the animals were more likely to survive, and to develop a relative immunity. Male rats and spayed females are highly refractory. A simultaneous injection of estrogen increases the toxicity in rats with intact ovaries; but it has no adjuvant toxic action in spayed female rats. From this the Brookline investigators conclude that "susceptibility to the menstrual toxin depends upon the presence of the ovaries," a conclusion confirmed by simultaneous injection of ovarian emulsions into spayed females which renders them susceptible. Large amounts of progesterone completely protect female rats from this toxin. From this, too, the Smiths conclude that the corpus luteum functions as an antitoxic endocrine. Chemical analyses show that the toxin is nondialysable, and found in greatest concentration in the euglobulin fraction of the menstrual discharge.

Mature female rabbits are extremely susceptible to this toxin, a single subcutaneous injection of 1 cubic centimeter often resulting in death within 48 hours. Repeated sublethal doses will immunize rabbits against the euglobulin, the resulting antiserum protecting female rats against multilethal doses of menstrual discharge.

Bacteriological examinations and control tests, with purposefully contaminated venous blood, rule out the probability that the menstrual toxin is a product of bacterial action. The toxin is apparently a specific endometrial product, which possibly functions as a hitherto unrecognized hormonal regulator of the normal sexual cycle.

The fact that the menstrual toxin is antigenic, and that its maximum toxic effects are manifest only under certain hormonal conditions, render the alleged toxic menstrual euglobulin a very promising instrument of immuno-endocrinologic research. A considerable amount of Smith's alleged effects, however, cannot be explained by our present knowledge of endocrinology and, therefore, should not be accepted without confirmation.

P. O. Box 51.

W. H. MANWARING,
Stanford University.

Of the various causes of accidental death, in the United States, motor vehicles lead; indeed, in 1939 they were responsible for 35 per cent of all such deaths, killing a total of 32,600 persons; in fact, a person died every 16 minutes throughout the year from automobile accidents. The number of deaths was two and one-half times those caused by syphilis, equal to those caused by diabetes, and one-half of those caused by tuberculosis. More children were killed by traffic accidents in 1939 than died from diptheria, measles, scarlet fever, and whooping cough combined. Besides the fatalities, 1,150,000 other persons were injured. Of every five who died in traffic accidents, two were pedestrians.

ORIGINAL ARTICLES

ADMINISTRATIVE PSYCHIATRY*

AARON J. ROSANOFF, M. D.
Sacramento

IT is my purpose today to present a brief discussion of administrative psychiatry, not in general terms, but in the more concrete terms of policies and operations of the State Department of Institutions, which are now in effect or expected to be put in effect in the near future.

In the field of psychiatry, science has outrun its applications; and I have conceived the main task of the Department to be that of introducing, in our practice, all measures and procedures that would be justified by the knowledge in our field which is well established but pigeonholed in scientific archives.

Some of these measures and procedures are new for California; but most of them had already been introduced, to some extent, during previous administrations, and we have been seeking merely to encourage their more systematic and more complete development.

OVERCROWDING IN MENTAL HOSPITALS

The mental hospitals of our State, like those of all other states in the Union, have been for many decades, and still are, in a condition of overcrowding to an extent averaging between 15 and 30 per cent beyond their capacity. During the past ten years we have been spending an average of $3,200,000 per biennium for major construction; but, at the same time, the net increase of the population of our mental hospitals has been at the rate of 840 patients per year, and for this reason the construction of new hospitals, or of additions to existing hospitals, has had no appreciable effect on the overcrowding.

The principal measures that we have planned for coping with this problem are: first, provision of facilities for prevention, early diagnosis, and timely treatment of mental disorders, with a view to stemming the flood of commitments of patients in advanced and, therefore, more chronic stages of their illness, who become, for the most part, permanent inmates of our institutions; and, second, extension of our parole system and other devices for extramural care of chronic, but inoffensive mental patients.

In other words, measures for the relief of overcrowding now consist not only of construction of additions to our institutions, but also of diminishing our intake of patients and increasing their outgo.

THE LANGLEY PORTER CLINIC

Appropriations have been obtained from the Legislature for the establishment of an acute neuropsychiatric unit on the campus of the Medical

* From the office of the director of the Department of Institutions, State of California.
Read before the Second General Meeting at the seventieth annual session of the California Medical Association, Del Monte, May 5–8, 1941.

Center of the University of California in San Francisco. This new institution, which is to be known as The Langley Porter Clinic, will be a 100-bed hospital and expected to be ready to open for reception of patients on or about January 1, 1942.

Provision has been made in the new building for a large outpatient department, which should create opportunities for preventive work.

Provision has also been made for early diagnosis and prompt institution of indicated treatment, such as fever therapy, insulin-shock therapy, chemical and electrical convulsive therapies, brain surgery for tumors or focal epilepsy, and the like.

A sort of partnership has been worked out between the Department of Institutions and the University of California, whereby much-needed training of personnel will be furnished at the new institution: training of medical students, graduate training of physicians, and special training for work in the neuropsychiatric field of nurses, social workers, and clinical psychologists.

Last, not least, provision is to be made for neuropsychiatric research. The partnership of the Department of Institutions with the University of California would seem an ideal one for the promotion of such research. The Department of Institutions has, in its hospitals, a vast amount of clinical and pathologic material, in which all neuropsychiatric research problems are rooted, and with the aid of which the necessary researches would become possible. The University of California will make available, for purposes of such researches, all necessary scientific personnel, facilities, and equipment.

ACTIVE THERAPY OF THE PSYCHOSES

Pending the establishment of The Langley Porter Clinic, the provision of active therapy of the psychoses in our mental hospitals has not been neglected. Such provision will, indeed, always be necessary for committed patients.

Attempts to introduce insulin-shock therapy in state hospitals had been made in a number of other states, and in California before the present administration assumed office. This is by no means a simple matter, and this type of therapy had been only partly successful in most institutions.

We were fortunate in being able to obtain, through the courtesy of the University of California, the services of Dr. Jacob P. Frostig, who, almost from the beginning, had participated in the original researches whereby insulin-shock therapy was developed and standardized. With him as a special instructor, this therapy was introduced at Camarillo State Hospital in the summer of 1939, for cases of schizophrenia under one year's duration, in the southern part of the State, and about a year later in Stockton State Hospital, for the northern part of the State.

There has been, both in Camarillo and in Stockton, an accumulation of a waiting list of patients requiring this treatment. Moreover, it seems desirable to extend the benefits of this treatment to cases of up to two years' duration. Therefore, at this time provision is being made for the use of insulin-shock therapy in Patton State Hospital, to be followed later by the introduction of this treatment elsewhere, probably in Agnews State Hospital.

Convulsive therapy, with the aid of metrazol has long been in use in our mental hospitals, having been found of special value in agitated depressions and in certain catatonic states.

As all know, metrazol therapy is fraught with some serious disadvantages, and seems to be destined to be replaced by convulsive therapy induced by means of electricity.

Many details of technique of electro-shock therapy are somewhat uncertain, and we have under way negotiations with the California Institute of Technology at Pasadena for the necessary research work whereby electro-shock therapy will be applied with precision, and with full control of every detail of the procedure.

In these ways steady progress is being made along the line of raising the recovery rates and shortening the duration of acute and subacute cases of schizophrenia, and of involutional melancholia and other types of agitated depression. In these ways, too, many chronic patients with catatonic stupor and catatonic excitement improve sufficiently to become better behaved and easier to care for, helpful in the institutions, and eventually, suitable for release on industrial parole or for family care.

EXTRAMURAL CARE OF MENTAL PATIENTS

For many years there has been a trend in the Department of Institutions toward a more liberal parole policy. With the consent of the Governor and the Legislature, in the early part of 1939 appropriations were made available for the establishment of a division of extramural care, employing many additional social workers in our seven mental hospitals. There is now a Supervisor of Extramural Care, whose headquarters are in the Department's office in Sacramento.

The number of patients on parole from the seven mental hospitals has been increased from 2,993, on December 31, 1938, to 4,880, on March 31, 1941. Patients in extramural care are classified in three main groups: those on parole at home; those on industrial parole; and those in family care.

With the aid of old-age assistance, and with the aid of further special financing to be approved by the Legislature, we expect, in the course of the next biennium, to increase the number of patients from mental hospitals in family care by at least 2,000, thus raising the total number of patients in extramural care to about 7,000.

Although these measures have not yet been completely developed, there has been already a partial checking of the heretofore steady increase of the population of our mental hospitals. Thus, during the ten years preceding the present administration, the increase of the population of our mental hospitals occurred at the average rate of 840 per year. During the calendar year 1940, that increase was by but 143.

FEVER THERAPY FOR PREPARETIC STAGES OF NEUROSYPHILIS

For many years cases of general paresis constituted about 7 per cent of the admissions to our mental hospitals. Most of these cases reached us in advanced stages of the disease, with established mental deterioration attributable, no doubt, to extensive brain tissue destruction that had already taken place. Fever therapy applied to these cases resulted in degrees of recoveries justifying release from the hospitals in but 25 or 30 per cent of the cases. The problem is obviously one of applying fever therapy in preparetic stages of neurosyphilis.

Accordingly, our seven mental hospitals have been made available for the admission of patients with neurosyphilis who are not yet insane, but who would be received on their voluntary application and treated by means of malarial inoculation.

The task of inducing patients of this group to accept hospitalization in our institutions for this purpose has been assigned to the division of extramural care. At the present time, about one out of three of the patients with neurosyphilis, admitted to our hospitals, is admitted on voluntary application.

It has been estimated that about 2,000 persons are registered in the records of the State Department of Health who have neurosyphilis, and in whom malarial inoculation might be indicated. This is the reservoir of patients from which our cases of general paresis are recruited. The more of them we can bring into our hospitals for malarial inoculation, the fewer cases of paresis will develop. The progress thus far made in connection with this matter encourages us to look forward to a dwindling of the numbers of cases of general paresis until an almost negligible residue will remain.

TUBERCULOSIS IN MENTAL PATIENTS

It is a matter of common observation that tubercular morbidity and mortality among inmates of mental hospitals is much higher than in corresponding age-groups of the unselected population. This is due partly to the overcrowding prevailing in all such hospitals, and partly to the great difficulty that is experienced in enforcing, among mental patients, the simple habits of personal hygiene, such as refraining from careless sneezing, coughing, and expectoration; cleansing of mouth and nasal passages; and the cleanliness of hands.

Thus a special hazard of tuberculosis exists for all inmates of mental hospitals and for employees as well.

In order to minimize this hazard, steps were taken, without delay, for the segregation of actively tubercular patients in special buildings in Patton State Hospital, for the southern part of the State, and in Napa State Hospital, for the northern part.

Appropriations were secured from the Legislature for the construction of special buildings for tubercular patients in these two institutions. Such buildings have already been completed and are now housing tubercular patients at Patton; and contracts for the construction of similar buildings have been awarded at Napa.

In these ways, not only the epidemiologic problem of tuberculosis in our mental hospitals has been solved, but also greatly improved facilities for the early diagnosis, and proper medical and surgical treatment of cases of tuberculosis, have been provided.

IMPROVED DIET RATIONS FOR INSTITUTION INMATES

The Department of Institutions has, for many years, made careful provision for adequate diet rations for the inmates in the institutions in its jurisdiction. Ten or fifteen years ago the main emphasis in this connection was laid on caloric requirements. The great recent advances in our knowledge of vitamins has necessitated some revisions in our rations. The most difficult phase of the problem seemed to be how to provide, without prohibitive cost, an adequate daily supply of B-complex vitamins.

The problem was solved for us by a committee of the National Research Council in Washington, which has formulated specifications for an "enriched" flour, to be had from the large milling companies at a slight increase of cost over ordinary types of flour. We are now introducing these specifications in our orders for flour to be supplied to us by the purchasing bureau of the Department of Finance.

NEW INSTITUTION FOR DEFECTIVE AND PSYCHOPATHIC DELINQUENTS

There are, in the jurisdiction of the Department of Institutions, three correctional schools and two institutions for the feebleminded and epileptic. The work in both types of institutions is being greatly hampered by the presence in them of defective and psychopathic delinquents.

It has been the experience, not only of the California correctional schools, but also of similar institutions in other states, that permanently successful rehabilitations of inmates have been attained in but a minority of the cases dealt with.

There is a great deal of new evidence, some of which has been yielded by recent studies of delinquency and criminality in twins, indicating that there is an organic basis, in the form of residuals of cerebral birth trauma, postnatal cerebral trauma, and acute infections complicated with cerebral involvement, underlying most instances of defective and psychopathic delinquency. This fact would account largely for the poor prognosis of such cases.

The presence of defective and psychopathic delinquents in a correctional school has the effect, also, of impairing the prognosis of a good many other inmates of such institutions, by a process comparable to contagion.

Hence, there has been under way in California, for at least fifteen years, a more or less active movement seeking the establishment of a special institution for the care of defective and psychopathic delinquents. This would simplify the work of the correctional schools and raise their rehabilitation rates to at least double their present percentages. At the same time, by the timely and permanent segregation of defective and psycho-

pathic delinquents, the development of criminal careers would be prevented on a scale that would hardly be possible by the application of any other known measure.

SUMMARY

To summarize as briefly as possible: The tasks of administrative psychiatry, as we are endeavoring to perform them in the Department of Institutions, are those of preventing mental disorders and delinquency; raising the recovery rate of mental disorders by means of active therapy of the psychoses; raising the percentages of successful rehabilitations of juvenile delinquents; and providing, in extramural environments, a normal family life for many selected chronic patients from our mental hospitals.

California State Department of Institutions.

TUMORS OF THE SMALL INTESTINE*

WAYLAND A. MORRISON, M. D.
AND
DOUGLAS DONATH, M. D.
Los Angeles

NUMEROUS individual case reports have been made of tumors of the small intestine, but due to their rarity there are few groups large enough to obtain a satisfactory statistical study. King, in 1917, reviewed the literature and was able to find fifty cases of benign tumors of the small intestine. In 1929, Rankin and Mayo reported fifty-five cases of carcinoma of the small intestine which had been seen at the Mayo Clinic. During the same period, 4,597 carcinomas of the rectum and colon were found, and 4,335 cases of carcinoma of the stomach were observed. In 1933, Rankin and Newell were able to find only thirty-five cases of benign tumors of the small intestine. Raiford reviewed the literature in 1932 and found 337 tumors which could be considered as authentic, noninflammatory, primary tumors. He presented a series of eight-eight cases which represented a study of 11,500 autopsies and 45,000 surgical specimens. Fifty of these tumors were benign and thirty-eight malignant.

SOURCE OF MATERIAL

This group of forty-five cases of tumors of the small intestine represents the tumors recognized in 25,621 autopsies from 1918 to 1941, and those recognized in general surgery from 1913 to 1941 at the Los Angeles County General Hospital, together with the surgery and autopsy records covering 28,390 admissions from 1929 to 1941 at the Santa Fe Coast Lines Hospital. All tumors in this group were primary lesions; no metastatic nor inflammatory lesions were included.

It is impossible to more than theorize in explaining the infrequency of tumors of the small intestine. The fact that the small intestine develops, for the most part, in the latter months of fetal life makes it reasonable to assume that there is less chance of a fetal rest's remaining. Cohnheim's theory definitely explains how certain tumors develop as the result of these rests. Investigators have attempted to explain the infrequency of small bowel tumors on the basis of the rapidity with which the intestinal contents pass through the small intestine in contrast to the relative stasis which occurs in the stomach and colon. The assumption is made that stasis produces irritation and that irritation predisposes to new growth.

TABLE 1.—*Type of Tumors Found*

Type	Number	Per Cent
Benign		
Aberrant pancreatic rest	1	2.2
Adenoma	3	6.6
Carcinoid	2	4.4
Fibroma	1	2.2
Fibromyoma	9	19.9
Lipoma	2	4.4
Hemangioma	1	2.2
Malignant		
Adenocarcinoma	17	37.7
Fibrosarcoma	5	11.1
Lymphosarcoma	2	4.4
Melanoma	2	4.4
TOTAL	45	100.0

Table 1 illustrates the type of tumors found in this series. Twenty-six are malignant and nineteen are benign. Adenocarcinoma is the most frequently encountered malignant tumor. Fibrosarcoma is next. Lymphosarcoma and malignant melanoma are less than half as frequent as fibrosarcoma.

Of the benign tumors, fibromyomas are found in nine cases. Three are adenomas. Two are lipomas and two carcinoids. There is one aberrant pancreatic rest, one fibroma, and one hemangioma.

Table 2 illustrates the age distribution of the benign and malignant tumors. There seems to be very little relationship between age and the occurrence of benign tumors in the small intestine. Malignant tumors in this series occur most frequently between the ages of fifty and seventy.

TABLE 2.—*Age Distribution of Tumors Found*

	Benign		*Malignant*	
Age	Number	Per Cent	Number	Per Cent
0- 9	3	6.6	0	0.0
10-19	1	2.2	1	2.2
20-29	0	0.0	2	4.4
30-39	4	8.8	3	6.6
40-49	3	6.6	3	6.6
50-59	4	8.8	6	13.3
60-69	1	2.2	5	11.1
70-79	2	4.4	4	8.8
80-	1	2.2	2	4.4
TOTAL	19	41.8	26	57.4

* Read before the Section on General Surgery at the seventieth annual session of the California Medical Association, Del Monte, May 5–8, 1941.